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ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-3873

EXAMINER

LAM, HUNG H

| ART UNIT | PAPER NUMBER |
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2615

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/029,968

Applicant(s)

EMME, NIELS PETER

Examiner

Hung H. Lam

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

2. The drawings are objected to because Figs. 3a-3c should be described in the Brief Description of the Drawings. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claim 33 is objected to because of the following informalities: change “the IR filter” in line 4 to “an IR filter”. Appropriate correction is required.
4. Claims 36 and 37 are objected to because of the following informalities: “Method according to” in line 1 should read as “A method according to”. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 19, 21-25, 29, 30, and, 34-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Uchino (US-6,580,459).

With regarding to **claim 19**, Uchino discloses a mobile communication terminal comprising:

a digital camera having an angle of view (it is inherent that the digital camera has an angle of view), the mobile communication terminal further comprising a source of infrared light

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for emitting a beam of infrared light (Fig. 6; Infrared Emitters 32,25), whereby the angle of view and the infrared light beam are directed such that a substantial part of the angle of view is overlapped by the infrared light beam so that objects in the angle of view may be illuminated by the infrared light beam (Col. 3, Ln. 22-25; Col. 3, Ln. 35-⁴⁸~~38~~).

With regarding to **claim 21**, Uchino discloses the mobile communication terminal comprising:

an infrared filter that can be moved in and out of the light path into the camera (Figs. 1 and 3; Filter 43; Col. 4, Ln. 56-61).

With regarding to **claim 22**, Uchino discloses a mobile communication terminal wherein:
the infrared filter has a first position in the light path and a second position out of the light path (Figs. 1 and 3; Filter 43; Col. 4, Ln. 56-61; Col. 5, Ln. 5-9; Col. 5, Ln. 17-21).

With regarding to **claim 23**, Uchino discloses a mobile communication terminal comprising:

an electro-mechanical or electronic actuator which moves the infrared filter from the first position to the second position and back (Fig. 6; Selection Drive Unit 49; Col. 4, Ln. 56-61; Col. 5, Ln. 5-9; Col. 5, Ln. 17-21).

With regarding to **claim 24**, Uchino discloses a mobile communication terminal comprising:

a display, which displays the image captured by the camera (Fig. 10; Display 71; Col. 6, Ln. 63-65).

With regarding to **claim 25**, Uchino discloses a mobile communication terminal wherein: an image captured by the camera is refreshed at regular intervals (it is inherent that the captured image must be refreshed at a predetermined interval in order for viewer of Display 71 to view images as desired).

With regarding to **claim 29**, Uchino discloses a mobile communication terminal wherein: the camera uses software which processes captured digital images (software is inherently executed in the CPU 51).

With regarding to **claim 30**, Uchino discloses a mobile communication terminal according wherein: a focusing system which focuses the light coming into the camera (Col. 3, Ln. 21-25; Col. 3, Ln. 35-48), which provides a first setting adjusted to characteristics of visual light and a second setting adjusted to the characteristics of the infrared light (Col. 4, Ln. 56-61; Col. 5, Ln. 5-9; Col. 5, Ln. 17-21).

With regarding to **claim 34**, Uchino discloses a method of capturing infrared images comprising the steps of:

providing a mobile communication terminal comprising a digital camera and an infrared port (Fig. 6, Camera 1, and infrared Emitter 32 and 25).

illuminating objects to be captured with infrared light emitted by the infrared port (Col. 3, Ln. 22-25; Col. 3, Ln. 35-48).

With regarding to **claim 35**, Uchino discloses a method comprising the step of:
arranging the digital camera and the source of infrared light in substantially a same direction on the mobile communication terminal (Fig. 6; see the direction of camera's lens 42 and infrared emitter 32).

With regarding to **claim 36**, Uchino discloses a method further comprising the steps of:
providing an infrared filter used when capturing images with visible light (Col. 5, Ln. 3-9),
and
removing the infrared filter from the light path into the camera when capturing infrared images (Col. 5, Ln. 20-25).

With regarding to **claim 37**, Uchino discloses the same limitations as recited in claim 36.
Therefore, claim 37 is analyzed and rejected as previously discussed under claim 36.

With regarding to **claim 38**, Uchino discloses a method wherein:
the camera comprises an auto focus system and further comprising the step of adjusting settings of the auto focus system to characteristics of the infrared light when capturing infrared images (Col. 3, Ln. 22-25; Col. 5, Ln. 17-25; infrared radiation irradiates toward auto focusing area).

With regarding to **claim 39**, Uchino discloses a method wherein:

the mobile communication terminal comprises a display (Display 71) and further comprising the step of displaying images captured by the digital camera on the display (Col. 6, Ln. 63-64; the camera inherently displays captured images on the display).

With regarding to **claim 40**, Uchino discloses a method comprising the step of:

capturing and displaying the images at intervals (Col. 6, Ln. 63-64; the camera must display captured images on the display at a desired interval), permitting the mobile communication terminal to be used as a night vision device (Col. 5, Ln. 20-25; it is inherent that the camera can be used in night vision because it is capable of emitting infrared light and acquiring infrared image).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 20 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchino in view of Wakui (US-6,023,292).

With regarding to **claim 20**, Uchino discloses the subject matter as claimed in claim 19. Further, Uchino discloses a mobile communication terminal wherein: the direction of the infrared light beam is substantially aligned with the angle of view (Fig. 6; lens 42 and infrared

emitter 32 are aligned and pointed toward photographing object). However, Uchino fails to disclose that the source of infrared light is movable.

In the same field of endeavor, Wakui teaches a camera utilizing an infrared port for data communication and distance detection (Col.4, Ln. 30-44; Col. 5, Ln. 51-67). Wakui further teaches that the distance between lens (18) and infrared light (17) are changeable (Fig. 1; Col. 6, Ln 13-18). The change in distance thus causes the infrared light to emit larger or smaller angular range (Fig. 1; Col. 5, Ln. 65-67 – Col. 6, Ln. 1-17). In light of the teaching from Wakui, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Uchino to include the infrared device of Wakui in order to control the infrared source for a larger or smaller angular range. The modifications thus enable the camera to communicate with external device or to detect photographing object in accordance to the angular range of the infrared source (Wakui; Col. 6, Ln. 1-28).

With regarding to **claims 26-28**, Uchino discloses the subject matter according to claim 19. Except that Uchino fails to disclose a mobile communication terminal wherein:

at least 60%, 80%, and 90% of the viewing angle is overlapped by the infrared light beam. However, the limitations are well known in the art as taught by Wakui.

In the same field of endeavor, Wakui teaches a camera utilizing an infrared port for data transmission and distance detection (Col.4, Ln. 30-44; Col. 5, Ln. 51-67). Wakui further teaches that the distance between lens (18) and infrared light (17) are changeable (Fig. 1; Col. 6, Ln 13-18). The change in distance thus causes the infrared source to emit larger or smaller angular range (Col. 5, Ln. 65-67 – Col. 6, Ln. 1-17). In light of the teaching from Wakui, it would have

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been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Uchino to include the infrared device of Wakui in order to adjust the angular range of the infrared source to overlap the angle view by at least 60%, 80% and 90% of the viewing angle. The modifications thus enable the camera to communicate with external device or to detect photographing object in accordance to the variation of angular range of the infrared source (Wakui; Col. 6, Ln. 1-28).

9. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchino in view of Bittner (US-6,304,728).

With regarding to **claim 31**, Uchino discloses the same subject matter as claimed in claim

19. Except that Uchino fails to disclose a mobile communication terminal comprising:

a lens cover, having a first position covering the lens of the camera and a second position exposing the lens. However, the limitations are well known in the art as taught by Bitter.

In the same field of endeavor, Bittner teaches a camera having a lens cover (62) coupled to actuator 36 in order for the rotating lever (tab 42) to close or open the camera lens cover (Col. 6, Ln. 1-14; Fig. 2 shows closed lens-cover in first position; Fig. 3 shows the opened lens-cover in second position). In light of the teaching from Bitter, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Uchino to include the lens-cover mechanism of Bittner in order to cover the lens in first position and expose the lens to the light path in second position. The modifications thus provide a long lasting camera by protecting the lens from being scratched, damaged or becoming dirty (Bittner; Col. 2, Ln. 10-15).

With regarding to **claim 32**, Uchino discloses the same subject matter as claimed in claim 19. Except that Uchino fails discloses a mobile communication terminal comprising:

an actuator which moves the lens cover from the first position to the second position and back. However, the limitations are well known in the art as taught by Bitter.

In the same field of endeavor, Bittner teaches a camera having a lens cover (62) coupled to actuator 36 in order for the rotating lever (tab 42) to close or open the camera lens cover (Col. 6, Ln. 1-14; Fig. 2 shows closed lens-cover in first position; Fig. 3 shows the opened lens-cover in second position). In light of the teaching from Bitter, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Uchino to include the lens-cover mechanism of Bittner in order to be able to move lens-cover from first closed position to the second opened position respectively. The modifications thus allow user to open and close the lens cover having a simple less expensive rotating mechanism.

With regarding to **claim 33**, Uchino in view of Bittner discloses a mobile communication comprising a handle having a first position associated with the first position of the lens cover (Bitter; Fig. 2 shows closed lens-cover in first position), the handle having a second position associated with the second position of the lens cover and the first position of the infrared filter (Bitter; Fig. 3 shows the opened lens-cover in second position; the second handle position is interpreted as the initial condition wherein the opening of lens-cover causes the infrared filter to dispose into optical path for capturing visible light image), and the handle having a third position associated with the second position of the infrared filter (infrared image is commonly captured in

low light environment or night vision, and thereby the third position must be associated with the second position of the infrared filter).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Sekiguchi (US-5,982,423) discloses video photographing apparatus having an infrared rays transmitting function and slidable infrared filter.

b) Housand et al. (US-6,359,681) disclose the combined LASER/FLIR optics system having IR beam diameter increases or decreases in according to the wide field of view or narrow field of view.

c) Kim (US-2004-0,157,612) discloses a mobile communication and stethoscope system.

d) Shinbori et al. (US 5,781,236) discloses an image sensing apparatus wherein an infrared or a low pass filter is inserted to the optical path in according to the control of a rotating lever.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung H. Lam whose telephone number is 571-272-7367. The examiner can normally be reached on Monday - Friday 8AM - 5PM.

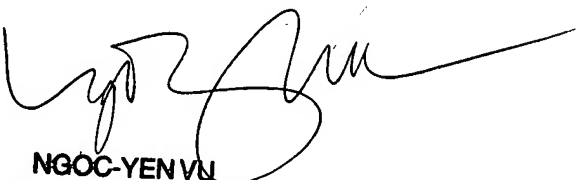
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary, NGOC YEN VU can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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HL



NGOC-YEN VU
PRIMARY EXAMINER